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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,612

01/31/2006

Gary M. Strandburg

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THE DOW CHEMICAL COMPANY

INTELLECTUAL PROPERTY SECTION, P. O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER

WINKLER, MELISSA A

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,612	<b>Applicant(s)</b> STRANDBURG ET AL.	
	<b>Examiner</b> Melissa Winkler	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 23-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/28/06 and 5/22/06</u>                                       | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 23 and 26 - 28** are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 23 and 26 - 28 are specifically indefinite as they depend from canceled claims. For the purposes of further examination, Claims 23 and 26 will interpreted to depend upon Claim 1.

**Claims 23 and 26 - 28** are additionally rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for the limitation of a foam in these claims, as the limitation of a foam was only set forth in the canceled claims.

**Claims 24 - 28 and 35** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The letters "a" and "b" have been used

previously in Claims 1 - 4 to designate a copolymer of ethylene and/or 1-propene and water, respectively. Claims 24 - 28 and 35 subsequently use these same letters but appear to redefine their meaning.

**Claim 31** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the Claim are not clearly defined by the term "continuously," as applied to the generation of the foam and the subjection of the foam to an energy source. Limits upon time, ingredients, and apparatuses would seem to render a continues generation of foam and application of heat unachievable. For the purpose of further examination, the claim will be interpreted as "the froth is generated and thereafter is subjected to atleast one drying energy source."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1 - 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,540,718 to Senda et al. in view of US 2001/0027219 to Stern et al.

**Regarding Claim 1.** Senda et al. teach a foamable composition comprising a copolymer of ethylene and an  $\alpha$ -olefin (Column 4, Lines 1 - 31). The  $\alpha$ -olefin is incorporated in such an amount that ethylene comprises from 88 – 97% of the copolymer (Column 4, Lines 32 - 34). Senda et al. also teach water may be incorporated into the composition. In Example 4, 300 parts water are added to the composition containing 100 parts particles of a copolymer of ethylene and 4-methyl-1-pentene (Column 12, Lines 24 – 31).

Senda et al. further teach an anionic surfactant may be added to the composition in an amount of 0.001 to 0.5 parts by weight per 100 parts by weight polyolefin resin. The amount of surfactant taught by Senda et al. consequently appears to fall slightly below the claimed range. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of surfactant used so that the foaming reaction mixture is adequately stabilized as it cures. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Senda et al. also teach a gaseous foaming agent is incorporated in an amount of 5 to 50 parts by weight per 100 parts by weight olefin (Col 6, Lines 59 - Column 7, Line 8). Yet Senda et al. do not expressly teach the foamable composition is prepared as a froth in which at least 80 percent of the total volume of all the components is a gas. However, Stern et al. a foam composition in which air preferably comprises 75 to 98% of the volume of the foam (Paragraph 92). Senda et al. and Stern et al. are analogous art as they are from the same field of endeavor, namely aqueous foamable compositions. At the time of invention, it would have been obvious to a person of ordinary skill in the art

to incorporate a gas in the volume range taught by Stern et al. in the composition taught by Senda et al. The motivation would have been that a gas in the volume range taught by Senda et al. provides advantages such as a final foam product with a lower density.

**Regarding Claim 2.** Senda et al. teach the froth of Claim 1 further comprising a dispersing agent/foam stabilizer which may be a water insoluble polymer such as methyl cellulose, an alkyl ether of cellulose (Column 7, Lines 9 – 14). Senda et al. indicate that water insoluble polymers are preferably avoided because of the environmental pollution they generate (Column 7, Lines 18 – 21), and are therefore choose an alternative dispersing agent/foam stabilizer to methyl cellulose. However, Senda et al. do teach other dispersing agents/foam stabilizers may be used in an amount of 0.001 to 0.5 parts by weight of the polyolefin resin (Column 7, Lines 29 – 32). At the time of invention, it would have been obvious to a person of ordinary skill in the art to use methyl cellulose in the amount taught by Senda et al. for the other foam stabilizers/dispersing agents to achieve substantially similar results. The motivation would have been that the addition of methyl cellulose provides advantages such as a composition that does not break apart during foaming (Column 7, Lines 22 – 24).

**Regarding Claim 3.** Senda et al. teach the foamable composition of Claim 1 preferably contains a copolymer of ethylene and an  $\alpha$ -olefin of 4 to 10 carbon atoms (Column 4, Lines 1- 3).

**Regarding Claim 4.** Senda et al. teach the foamable composition of Claim 3 wherein the  $\alpha$ -olefin of the copolymer of ethylene and an  $\alpha$ -olefin may be 1-butene, 1-hexene, or 1-octene (Column 4, Lines 26 – 29). The ethylene/  $\alpha$ -olefin copolymer has a melt index between 0.1 to 5 g/10 min (Column 4, Lines 1 – 3).

**Claims 23 – 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,540,718 to Senda et al. in view of US 2001/0027219 to Stern et al. as applied to Claim 1 above, and further in view of US 4,990,541 to Nielsen et al.

**Regarding Claims 23 - 28.** Senda et al. teach the foamable composition of Claim 1 but do not expressly teach it is added to an absorbent article. However, Nielsen et al. also teach a foamable composition containing ethylene copolymers that is indicated to be useful within diapers and sanitary napkins (Abstract). The foam composition/latex may be adhered to a nonwoven substrate, preferably a flexible fabric, to provide a laminate useful in hygiene articles (Column 5, Lines 33 -55). Senda et al. and Nielsen et al. are analogous art as they are from the same field of endeavor, namely foamable compositions containing ethylene copolymers. At the time of invention, it would have been obvious to a person of ordinary skill in the art to incorporate the composition taught by Senda et al. into an absorbent article. The motivation would have been that the composition taught by Senda et al. would impart advantages to an absorbent article



such as added mechanical strength and excellent cushioning (Senda et al., Column 8, Lines 6 – 18).

**Claims 29 – 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,540,718 to Senda et al. in view of US 2001/0027219 to Stern et al. as applied to Claim 1 above, and further in view of EP 0 526 872 A1 to Masumoto et al..

**Regarding Claim 29 - 33.** Senda et al. teach the process of making the froth of Claim 1. While they Senda et al. indicate the froth to be suitable for foaming (Column 1, Lines 6 – 7), the process of preparing a foam from this froth is not expressly taught. However, Matsumoto et al. also teach a process of making a polyolefin composition and the foaming of this composition to form an open-cell foam (Column 7, Line 23). Senda et al. and Matsumoto et al. are analogous art as they are from the same field of endeavor, namely foamable polyolefin compositions. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the froth taught by Senda et al. to prepare an open-cell foam. The motivation would have been that the polyolefin composition taught by Senda et al. would impart many desirable properties to an open-cell foam such as good cushioning, heat-resistance, toughness, and a low density (Senda et al., Column 8, Lines 17 – 20).

Matsumoto et al. also teach the method of preparing the foam involves at least one drying energy source. Specifically, the drying energy sources applied may be a oven/heated air generator and subsequently a microwave/dielectric heating device (Page 6, Lines 48 -53 and Page 7, Lines 7 - 10). At the time of invention, it would have been obvious to a person of ordinary skill in the art to use one or more drying energy sources to prepare a foam from the composition taught by Senda et al. The motivation would have been that use of drying energy sources helps to form a foam with cell membranes that are easily ruptured so that an open-cell foam may be produced (Matsumoto et al., Page 7, Lines 13 - 18).

Senda et al. and Matsumoto et al. are silent regarding the volume of a final foam product relative to the volume of the froth composition. Consequently, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s) and process limitation(s). Therefore, the claimed effects and physical properties, i.e. the volume of a resulting foam that is not less than 70 volume percent of the volume of the froth, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's

position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

**Regarding Claim 34.** Senda et al. teach the method of Claim 29 but do teach at least one major surface is heated prior to or after foaming. However, Matsumoto et al. do teach a process of heating the surface of a foamable polyolefin composition prior to foaming (Page 6, Line 52 – Page 7, Line 1). At the time of invention, it would have been obvious to a person of ordinary skill in the art to heat a surface of a polyolefin composition prior to foaming. The motivation would have been that this heating would be useful in achieving a foam product with cell membranes that are easily ruptured so that an open-cell foam could be produced (Matsumoto et al., Page 7, Lines 13 - 18).

Senda et al. and Matsumoto et al. do not expressly teach at least one major surface is softened to a distance of at least 2% of the foam's initial thickness below the surface. Consequently, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s) and process limitation(s). Therefore, the claimed effects and physical properties, i.e. a softening of all the major surface to a distance of at least 2% of the foam's initial thickness below the surface, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the

applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

**Claim 35** is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,448,321 to Tokita in view of US 6,130,274 to Song et al.

**Regarding Claim 35.** Tokita et al. teach an aqueous dispersion containing an olefin copolymer, montanic acid, and water (Column 4, Lines 19 - 20; Claims 4 and 5) Tokita et al. also teach a basic substance may be added to the aqueous solution (Column 8, Lines 36 - 60).

Tokita et al. disclose the solid content of the dispersion may be between 75 to 97% by weight of the dispersion (Claim 5), therefore falling outside the range claimed by the applicants. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of solid in the aqueous dispersion to diversify the potential uses of the final product. A prima facie case of obviousness may be rebutted, however, where

the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Tokita et al. also do not expressly indicate that the water used in preparing the aqueous dispersion is deionized water. However, Song et al. also teach an aqueous dispersion that is prepared with deionized water (Column 7, lines 33 – 38). Tokita et al. and Song et al. are analogous art as they are from the same field of endeavor, namely aqueous dispersions which may contain ethylene. At the time of invention, it would have been obvious to a person of ordinary skill in the art to prepare the dispersion taught by Tokita et al. with deionized water. The motivation to use deionized water would have been to provide advantages such as minimization of impurities.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 1 - 4 and 29 - 34** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 23 - 31 of copending Application No. 11/754,036. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Regarding Claims 1 and 29.** A combination of Instant Claims 1 and 29 correspond to Claim 23 of Application No. 11/754,036.

**Regarding Claims 1, 2, and 29.** A combination of Instant Claims 1, 2, and 29 correspond to Claim 24 of Application No. 11/754,036.

**Regarding Claims 1, 3, and 29.** A combination of Instant Claims 1, 3, and 29 correspond to Claim 25 of Application No. 11/754,036.

**Regarding Claims 1, 4, and 29.** A combination of Instant Claims 1, 4, and 29 correspond to Claim 26 of Application No. 11/754,036.

**Regarding Claims 1, 29, and 30.** A combination of Instant Claims 1, 29, and 30 correspond to Claim 27 of Application No. 11/754,036.

**Regarding Claims 1, 29, and 31.** A combination of Instant Claims 1, 29, and 31 correspond to Claim 28 of Application No. 11/754,036.

**Regarding Claims 1, 29, and 32.** A combination of Instant Claims 1, 29, and 32 correspond to Claim 29 of Application No. 11/754,036.

**Regarding Claims 1, 29, and 33.** A combination of Instant Claims 1, 29, and 33 correspond to Claim 30 of Application No. 11/754,036.

**Regarding Claims 1, 29, and 34.** A combination of Instant Claims 1, 29, and 34 correspond to Claim 31 of Application No. 11/754,036.

**Claims 1 - 4 and 29 - 34** are additionally provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 23 - 31 of copending Application No. 11/754,074. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Regarding Claims 1 and 29.** A combination of Instant Claims 1 and 29 correspond to Claim 23 of Application No. 11/754,074.

**Regarding Claims 1, 2, and 29.** A combination of Instant Claims 1, 2, and 29 correspond to Claim 24 of Application No. 11/754,074.

**Regarding Claims 1, 3, and 29.** A combination of Instant Claims 1, 3, and 29 correspond to Claim 25 of Application No. 11/754,074.

**Regarding Claims 1, 4, and 29.** A combination of Instant Claims 1, 4, and 29 correspond to Claim 26 of Application No. 11/754,074.



**Regarding Claims 1, 29, and 30.** A combination of Instant Claims 1, 29, and 30 correspond to Claim 27 of Application No. 11/754,074.

**Regarding Claims 1, 29, and 31.** A combination of Instant Claims 1, 29, and 31 correspond to Claim 28 of Application No. 11/754,074.

**Regarding Claims 1, 29, and 32.** A combination of Instant Claims 1, 29, and 32 correspond to Claim 29 of Application No. 11/754,074.

**Regarding Claims 1, 29, and 33.** A combination of Instant Claims 1, 29, and 33 correspond to Claim 30 of Application No. 11/754,074.

**Regarding Claims 1, 29, and 34.** A combination of Instant Claims 1, 29, and 34 correspond to Claim 31 of Application No. 11/754,074.

***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Winkler whose telephone number is (571)270-3305. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MW  
November 20, 2007

  
MARK EASHOO, PH.D.  
SUPERVISORY PATENT EXAMINER

11/26/07